



**Massachusetts Bay  
Transportation Authority**

## Commuter Rail Coaches ISA

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Joint Meeting of the MassDOT and Fiscal and Management Control Board

October 28, 2019

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# Overview

**Commuter rail passenger service is impacted by necessary single-level coach retirements, increased service demands, and future expansion.**

- **260 single-level coaches** are scheduled for retirement.
  - **181 bi-level coaches** needed for equivalent seating capacity.
- Recent studies have shown a **continuing increase in Commuter Rail ridership**, which will be further impacted by the addition of South Coast Rail and multiple MassDOT highway projects being scheduled in the near future.
- Procurement quantities of **over 200 coaches** are projected in order to support expected increases in ridership in the near term.
- The MBTA has determined that satisfying the immediate need for new coaches will be best accomplished through a **sole-source contract with Hyundai-Rotem (HR) for 80 coaches**.
  - These 80 coaches will provide immediate relief for the delayed retirement of the MBB fleet, which has been evaluated as needing replacement as soon as possible. This includes 31 Control Trailer Coaches and 31 Blind Trailer Coaches.
  - This also includes 2 decommissioned bi-levels and the 16 additional bi-level coaches required for the implementation of South Coast Rail.



# Overview

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- Vehicle Engineering is seeking MassDOT Board/FMCB approval for funding through FY27 for the sole-source procurement of 80 Commuter Rail Bi-level Coaches from Hyundai Rotem.
- Funding will come from two sources:
  - South Coast Rail (SCR) is receiving 16 of the 80 coaches and therefore will contribute \$69,037,292 (20% of total)
  - The balance of funding (\$276,149,167) will come through an Interagency Service Agreement (ISA) between MassDOT and the MBTA



# 80 Bi-level Coaches

## Expedited Delivery of Pilot & Production Coaches

- Targeted qualification testing of new systems only (PTC, LED lighting, etc.)
- Assembly of all vehicles will be in South Korea to expedite delivery of coaches
- HR has committed to utilizing significant US content in the fabrication of these vehicles:
  - 49% for Control Trailer Coaches (CTC)
  - 47% for Blind Trailer Coaches (BTC)
- Delivery will begin September 2022
  - First 16 units needed for South Coast Rail by December 2022
  - All 80 coaches delivered by summer 2024
- Will allow the replacement of 62 MBB coaches that were originally scheduled for retirement in 2013 (per the MBTA Railroad Operations Equipment Asset Inventory May 2012 draft)

## Improvements

- Positive Train Control (PTC)
- LED lighting
- Pilot upgrades
- Vendor product improvements
- Benefits of bi-level coaches:
  - Most efficient way to add capacity
  - Compatible with current fleet and infrastructure
  - Ease of maintenance / experienced workforce
  - Does not preclude procurement of different vehicles/technology

## Benefits of Current Fleet Reproduction

- Reduced risks due to familiarization with proven manufacturing and engineering design
- Minimal operating and maintenance training required
- Latest procurement (FC-668) met all FRA requirements
- Minimal design impact
- Guaranteed compatibility with the existing fleet
- Final testing and acceptance of completed production coaches will be performed on MBTA property



# Total Project Budget

- The proposed total project budget is **\$345,186,459** with the following line items:

Line Item	Budget
Material procurement	\$278,589,000
Professional services	\$8,303,289
Force account	\$5,415,984
Project administration	\$6,318,648
Indirect	\$7,823,088
Unallocated contingency (material & project)	\$38,736,450

- This procurement is being **100% state funded**:
  - South Coast Rail (SCR) is receiving 16 of the 80 coaches; therefore will provide 20% (\$69,037,292)
  - The balance will be via transfer from MassDOT to the MBTA through an Interagency Service Agreement (ISA) in the amount of \$276,149,167.



# Request of the Fiscal and Management Control Board

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Vehicle Engineering requests that the Massachusetts Department of Transportation and Fiscal and Management Control Board approve the transfer of **\$345,186,459** from MassDOT to the MBTA through an Interagency Service Agreement to fund the MBTA Commuter Rail Bi-Level Coach Procurement with Hyundai-Rotem.

